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*Gmy S. Klann*  
Signature

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of:

Thomas Malvar

Amy Jelen Gilmer

§ Group Art Unit:

§

§ Examiner:

§

Serial No.:

§ Atty. Dkt. No.: **MECO:210--4**

**11792.0210.DVUS03**

Filed: April 2, 2004

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For: ANTIBODIES IMMUNOLOGICALLY REACTIVE  
WITH BROAD-SPECTRUM  
DELTA-ENDOTOXINS (AMENDED)

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**INFORMATION DISCLOSURE STATEMENT**

**MAIL STOP: PATENT APPLICATION**

Commissioner for Patents

P.O. Box 1450

Alexandria, Virginia 22313-1450

Sir:

In compliance with the duty of disclosure under 37 C.F.R. § 1.56, Applicants respectfully request that this Information Disclosure Statement be entered and that the references listed on attached Form PTO-1449 be considered by the Examiner and made of record.

The present application is a divisional application of U.S. Serial No. 10/365,465, filed February 12, 2003, which is a division of U.S. Serial No. 09/873,873 filed June 4, 2001, now U.S. Patent No. 6,538,109, which is a division of application Serial No. 09/253,341 filed February 19, 1999, now U.S. Patent No. 6,242,241, which is a division of application Serial No. 08/922,505 filed September 3, 1997, now U.S. Patent No. 6,110,464, which is a continuation-in-part of U.S.

Patent application Serial No. 08/754,490 filed November 20, 1996, now U.S. Patent No. 6,017,534, each of which are relied upon for an earlier filing date under 35 U.S.C. § 120. In accordance with Rule 37 C.F.R. § 1.98(d), copies of the listed documents are not enclosed as they have been previously cited by or submitted to the U.S. Patent and Trademark Office in prior applications U.S. Serial NO. 10/365,645, and U.S. Patent No. 6,538,109, U.S. Patent No. 6,242,241, U.S. Patent No. 6,110,464, and U.S. Patent No. 6,017,534.

In accordance with 37 C.F.R. § 1.97(g), this Information Disclosure Statement is not to be construed as a representation that a search has been made or that no other possibly material information, as defined in 37 C.F.R. § 1.56, exists.

No fees are believed to be due in connection with the filing of this Information Disclosure Statement; however, if any fees should be due, the Commissioner is hereby authorized to deduct said fees from Deposit Account No. 01-2508/11792.0210.DVUS03.

Respectfully submitted,



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Date: April 2, 2004

<b>Form PTO-1449</b> (modified)		Atty. Docket No. MECO:210-4	Serial No.
List of Patents and Publications for Applicant's		Applicants Thomas Malvar and Amy Jelen Gilmer	
<b>INFORMATION DISCLOSURE STATEMENT</b>  (Use several sheets if necessary)		Filing Date: April 2, 2004	Group:
U.S. Patent Documents See Page 1	Foreign Patent Documents See Page 1-2	Other Art See Pages 2-5	

### U.S. Patent Documents

Exam. Init.	Ref. Des.	Document Number	Date	Name	Class	Sub Class	Filing Date if App.
	A1	5,441,884	08/15/95	Baum	435	252.31	
	A2	5,449,681	09/12/95	Wickiser	514	366	
	A3	5,384,253	01/24/95	Krzyzek <i>et al.</i>	435	172.3	
	A4	5,500,365	03/19/96	Fischhoff <i>et al.</i>	435	240.4	
	A5	5,055,294	10/08/91	Gilroy	424	93	
	A6	5,128,130	07/07/92	Gilroy <i>et al.</i>	424	93A	
	A7	5,349,124	09/20/94	Fischhoff <i>et al.</i>	800	205	
	A8	5,380,831	01/10/95	Adang <i>et al.</i>	536	23.71	
	A9	5,593881	01/14/97	Thompson <i>et al.</i>	435	240.1	
	A10	5,508,264	04/16/96	Bradfisch <i>et al.</i>	514	12	

### Foreign Patent Documents

Exam. Init.	Ref. Des.	Document Number	Date	Country	Class	Sub Class	Translation Yes/No
	B1	WO93/07278	04/15/93	WIPO			
	B2	WO95/02058	01/19/95	WIPO			

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	B3	WO95/06730	03/09/95	WIPO			
	B4	WO95/30752	11/16/95	WIPO			
	B5	WO95/30753	11/16/95	WIPO			
	B6	EP 0 228 838 B1	12/09/86	Europe			
	B7	WO 98/02039	01-22-98	WIPO			
	B8	EP 0359472	12/17/95	Europe			
	B9	EP 0193259	09/03/86	Europe			
	B10	EP 0213818	02/06/91	Europe			
	B11	EP 0731170	09/11/96	Europe			
	B12	WO 84/02913	08/02/84	WIPO			
	B13	EP 0290395	11/09/88	Europe			
	B14	EP 0292435	07/26/95	Europe			

### Other Art (Including Author, Title, Date Pertinent Pages, Etc.)

Exam. Init.	Ref. Des.	Citation
	C1	Baum <i>et al.</i> , "Novel Cloning Vectors for <i>Bacillus thuringiensis</i> ," <i>Appl. Environ. Microbiol.</i> , 56(11):3420-3428, 1990.
	C2	Bosch <i>et al.</i> , "Recombinant <i>Bacillus thuringiensis</i> Crystal Proteins with New Properties: Possibilities for Resistance Management," <i>Bio/Technology</i> , 12:915-918, 1994.
	C3	Caramori <i>et al.</i> , "In vivo generation of hybrids between two <i>Bacillus thuringiensis</i> insect-toxin-encoding genes," <i>Gene</i> , 98(1):37-44, 1991.

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	C4	Caramori <i>et al.</i> , "Bacillus thuringiensis kurstaki hybrid endotoxin genes generated by <i>In Vivo</i> recombination," ISBN 1-56081-028-9, 0(0):259-267, 1990.
	C5	Gill <i>et al.</i> , "Identification, Isolation, and Cloning of a Bacillus thuringiensis CryIAc Toxin-binding Protein from the Midgut of the Lepidopteran Insect <i>Heliothis virescens</i> ," <i>J. Biol. Chem.</i> 270(45):27277-27282, 1995.
	C6	Grochulski <i>et al.</i> , "Bacillus thuringiensis CryIA(a) Insecticidal Toxin: Crystal Structure and Channel Formation," <i>J. Mol. Biol.</i> , 254:447-464, 1995.
	C7	Honée <i>et al.</i> , "The C-terminal domain of the toxic fragment of a Bacillus thuringiensis crystal protein determines receptor binding," <i>Mol. Microbiol.</i> , 5(11):2799-2806, 1991.
	C8	Knight <i>et al.</i> , "Molecular Cloning of an Insect Aminopeptidase N that Serves as a Receptor for Bacillus thuringiensis CryIA(c) Toxin," <i>J. Biol. Chem.</i> , 270(30):17765-17770, 1995.
	C9	Lee <i>et al.</i> , "Domain III Exchanges of Bacillus thuringiensis CryIA toxins affect binding to different gypsy moth midgut receptors," <i>Biochem. Biophysical Research Communications</i> , 216(1):306-312, 1995.
	C10	Masson <i>et al.</i> , "The CryIA(c) Receptor Purified from Manduca sexta Displays Multiple Specificities," <i>J. Biol. Chem.</i> , 270(35):20309-20315, 1995.
	C11	Mettus <i>et al.</i> , "Expression of Bacillus thuringiensis δ-Endotoxin Genes during Vegetative Growth," <i>Appl. Environ. Microbiol.</i> , 56(4):1128-1134, 1990.
	C12	Nakamura <i>et al.</i> , "Construction of chimeric insecticidal proteins between the 130-kDa and 135-kDa proteins of Bacillus thuringiensis subsp. <i>aizawai</i> for analysis of structure-function relationship," <i>Agric. Biol. Chem.</i> , 54(3):715-724, 1990.
	C13	Racapé <i>et al.</i> , "Properties of the pores formed by parental and chimeric Bacillus thuringiensis insecticidal toxins in planar lipid bilayer membranes," <i>Biophysical J.</i> 72(2) (part 2 of 2), A82, M-Pos329, 1997, ISSN: 0006-3495.
	C14	Raymond <i>et al.</i> , "Larvicidal activity of chimeric Bacillus thuringiensis protoxins," <i>Mol. Microbiol.</i> , 4(11):1967-1973, 1990.
	C15	Rudd <i>et al.</i> , "Domain III Substitution in Bacillus thuringiensis Delta-Endotoxin CryIA(b) Results in Superior Toxicity for Spodoptera exigua and Altered Membrane Protein Recognition," <i>Appl. Environ. Microbiol.</i> , 62(5):1537-1543, 1996.

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	C16	Rudd <i>et al.</i> , "Different Domains of <i>Bacillus thuringiensis</i> δ-Endotoxins Can Bind to Insect Midgut Membrane Proteins on Ligand Blots," <i>Appl. Environ. Microbiol.</i> , 62(8):2753-2757, 1996.
	C17	Schnepf <i>et al.</i> , "Specificity-determining Regions of a Lepidopteran-specific Insecticidal Protein Produced by <i>Bacillus thuringiensis</i> ," <i>J. Biol. Chem.</i> 265(34):20923-20930, 1990.
	C18	Shadenkov <i>et al.</i> , "Construction of a hybrid gene from CryIIIA and CryI(a) δ-endotoxin genes of <i>Bacillus thuringiensis</i> and expression of its derivatives in <i>Escherichia coli</i> cells," <i>Mol. Biol.</i> , 27(4):586-591, Part 2, 1993.
	C19	Thompson <i>et al.</i> , "Structure, Function and Engineering of <i>Bacillus thuringiensis</i> Toxins," <i>Genetic Engineering</i> , 17:99-117, 1995.
	C20	Vachon <i>et al.</i> , "Mode of action of <i>Bacillus thuringiensis</i> insecticidal crystal proteins: A study of chimeric toxins," <i>FASEB Journal</i> 10(3), A74, 429, 1996, ISSN: 0892-6638.
	C21	De Maagd <i>et al.</i> , "Different domains of <i>Bacillus thuringiensis</i> δ-endotoxins can bind to insect midgut membrane proteins on ligand blots," <i>Applied and Environmental Microbiology</i> , 62(8):2753-2757, 1996.
	C22	Honée <i>et al.</i> , "A translation fusion product of two different insecticidal crystal protein genes of <i>Bacillus thuringiensis</i> exhibits an enlarged insecticidal spectrum," <i>Applied and Environmental Microbiology</i> , 56(3):823-825, 1990.
	C23	International Search Report dated April 20, 1998 (PCT/US97/21587)(MECO:205P).
	C24	Adang <i>et al.</i> , "The reconstruction and expression of a <i>Bacillus thuringiensis</i> cryIIIA gene in protoplasts and potato plants," <i>Plant Mol. Biol.</i> , 21:1131-1145, 1993.
	C25	Bernhard, "Studies on the delta-endotoxin of <i>Bacillus thuringiensis</i> var. <i>tenebrionis</i> ," <i>FEMS Microbiol. Letters</i> , 33:261-265, 1986.
	C26	Herrnstadt <i>et al.</i> , "A new strain of <i>Bacillus thuringiensis</i> with activity against Coleopteran insects," <i>BIO/TECHNOLOGY</i> , 4:305-308, 1986.
	C27	Höfte <i>et al.</i> , "Structural and functional analysis of a cloned delta endotoxin of <i>Bacillus thuringiensis</i> berliner 1715," <i>Eur. J. Biochem.</i> , 171:273-280, 1986.
	C28	Klier <i>et al.</i> , "Cloning and expression of the crystal protein genes from <i>Bacillus thuringiensis</i> strain berliner 1715," <i>EMBO J.</i> , 1(7):791-799, 1982.

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	C29	Koziel <i>et al.</i> , "Field performance of elite transgenic maize plants expressing an insecticidal protein derived from <i>Bacillus thuringiensis</i> ," <i>Bio/Technol.</i> , 11:194-200, 1993.
	C30	Krieg <i>et al.</i> , " <i>Bacillus thuringiensis</i> var. <i>tenebrionis</i> , a new pathotype effective against larvae of Coleoptera," <i>Z. ang. Ent.</i> , 96:500-508, 1983.
	C31	Krieg <i>et al.</i> , "New results on <i>Bacillus thuringiensis</i> var. <i>tenebrionis</i> with special regard to its effect on the Colorado beetle ( <i>Leptinotarsa decemlineata</i> )," <i>Anz. Schädlingskde Pflanzenschutz Umweltschutz</i> , 57(8):145-150, 1984.
	C32	Murray <i>et al.</i> , "Analysis of unstable RNA transcripts of insecticidal crystal protein genes of <i>Bacillus thuringiensis</i> in transgenic plants and electroporated protoplasts," <i>Plant Mol. Biol.</i> , 16:1035-1050, 1991.
	C33	Perlak <i>et al.</i> , "Genetically improved potatoes: protection from damage by Colorado potato beetles," <i>Plant Mol. Biol.</i> , 22:313-321, 1993.
	C34	Perlak <i>et al.</i> , "Insect resistant cotton plants," <i>Bio/Technol.</i> , 8:939-943, 1990.
	C35	Perlak <i>et al.</i> , "Modification of the coding sequence enhances plant expression of insect control protein genes," <i>Proc. Natl. Acad. Sci. USA, Biochem.</i> , 88:3324-3328, 1991.
	C36	Schnepf and Whiteley, "Cloning and expression of the <i>Bacillus thuringiensis</i> crystal protein gene in <i>Escherichia coli</i> ," <i>Proc. Natl. Acad. Sci. USA</i> , 78(5), 2893-2897, 1981.
	C37	Gill <i>et al.</i> , "Cytologic Activity and Immunological Similarity of the <i>Bacillus thuringiensis</i> subsp. <i>israelensis</i> and <i>Bacillus thuringiensis</i> subsp. <i>morrisoni</i> Isolate PG-14 Toxins. <i>Appl. And Enviro. Microbiol.</i> 53(6):1251-1256, 1987.

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